

## NOTES ON PARASITIC HYMENOPTERA FROM AUSTRALIA, WITH DESCRIPTIONS OF NEW SPECIES.

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(Text-figures 1-4.)

THIS paper treats of the genus *Proamotura* Girault in the *Chalcidoidea*, one new species and two new varieties being described. In the same superfamily, a description of the first Australian species of the peculiar genus *Leptofoenus* Smith is given. In the family *Scelionidae* of the *Proctotrypoidea*, one new genus is proposed, and a genus new to Australia is recorded.

The illustrations have been prepared by Mr. I. W. Helmsing, of the Queensland Department of Agriculture.

### CHALCIDOIDEA.

Family CLEONYMIDÆ.

Subfamily LEPTOFŒNINÆ.

#### **Leptofoenus** Smith.

Trans. Ent. Soc. London, vol. 1, 1862, p. 43.

*Pelecinnella* Westwood, Trans. Ent. Soc. London, 1868, p. 35.

C. T. Brues has recently (*Psyche*, Vol. XXVI., No. 6, 1924, p. 302-304) pointed out that the genus long known as *Pelecinnella* Westwood is antedated by *Leptofoenus* Smith. The genus is a very peculiar one, forming a distinct subfamily, characterised, *inter alia*, by the very long pronotum. Five species have hitherto been recognised, all occurring in tropical America. Hence, it is with much pleasure that I am able to record the presence of these curious Chalcids in Australia.

#### **Leptofoenus australiensis** new species.

*Female*.—Length, excluding the ovipositor, 14 mm.; including the ovipositor, 24 mm.

Brilliant metallic blue-green, the median lobe of the mesoscutum posteriorly, adjacent areas of the parapsides largely, and posterior two-thirds of the scutellum, æneous-black; abdomen marked with pure white as follows:—An oval spot on either side of segment 3, an oval spot on either side of apical third of segment 5 the spots almost meeting above at the median line, base of segment 8 above, apex of stylus, and a long narrow area on either side of the median line of the venter of segments 6 and 7; exerted oviposital valves dark, with a pale yellow band a little before the apex; coxæ metallic green, also posterior femora, the rest of the legs yellow-brown, the anterior femora washed with metallic inwardly, the posterior tibiæ dusky for central third



FIG. 1a.

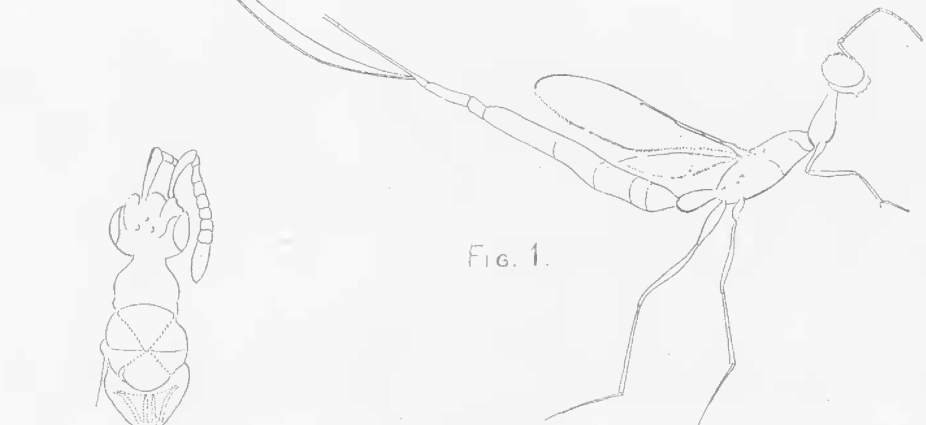


FIG. 1.

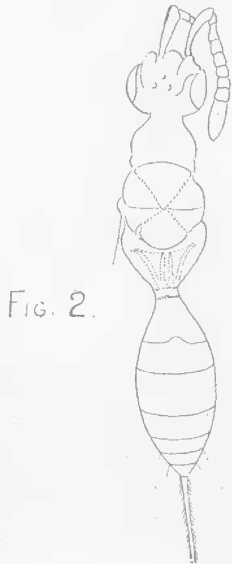


FIG. 2.

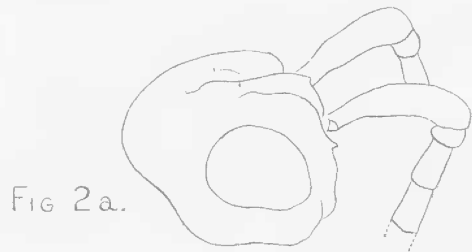


FIG 2a.

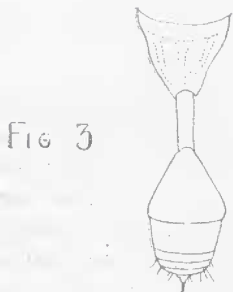


FIG 3



FIG 2b.



FIG 3 a

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1927.

their base with a pale whitish band; antennal scape pallid at base, dark for apical half, pedicel yellowish, the next four joints piceous, the following three joints testaceous, the apical funicle joint and the club black.

Vertex of head moderately long, with a deep broad median immargined groove or impression from the anterior ocellus to the posterior margin, this depression much wider than the raised area between it and the eye margin; anterior ocellus within the groove, the lateral ocelli situated rather far forward outside the groove against the eyes; on the frons the depression is continued almost to the mouth as a deep margined antennal groove; eyes large, reaching to the line of the mouth; just in front of the lateral ocelli the areas outside the groove have their inner borders margined and convexly produced toward and above the anterior ocellus; the sculpture on these swollen portions is coarser with three or four transverse striæ or carinæ, the fourth and anterior carina is on a line with the anterior ocellus and is somewhat raised; below this area there is a longitudinal line on either side of three short strongly raised carinæ, which are precipitous dorsally, sloping ventrally, so that from the lateral aspect the upper frons is armed with a longitudinal row of four erect teeth on either side; inside the teeth the surface slopes to the margined antennal impression, the lower three teeth being connected by short carinæ to the margin; sculpture generally finely transversely striate or wrinkled, more or less reticulate between the striæ; on the lower half of the frons there is a line of short yellow hairs against the eye margins, a line of similar pubescence against the mouth border, and scattered hairs on the surface. Antennæ inserted a little above the mouth and slightly above the line of the ventral eye margins; scape long and slender; pedicel over twice as long as its greatest width; funicle 1 very short, somewhat wider than long; 2-8 cylindrical; 2 very long, two-thirds as long as the scape, fully twice as long as the pedicel; 3-8 decreasing in length, 8 about twice as long as wide; club slender, twice as long as funicle 8. Thorax long and slender; pronotum long, slender, not or hardly longer than the scutum, narrowed anteriorly, from lateral aspect constricted at its posterior margin and well-separated from the scutum, transversely wrinkled, with an elongate smooth area laterally on its posterior half on either side; scutum convex, strongly transversely wrinkled, the parapsidal furrows deep, the median lobe produced anteriorly; scutellum large, densely reticulate for the most part with a longitudinal tendency, produced in front into a point between the axillæ; axillæ long, almost meeting at base, separated from the

#### EXPLANATION OF TEXT-FIGURES 1-3.

- Fig. 1.—*Leptofænus australiensis* Dodd. Female; side view.  
 Fig. 1A.—*Leptofænus australiensis* Dodd. Female; antenna.  
 Fig. 2.—*Proamotura insularis* var. *grandis* Dodd. Female.  
 Fig. 2A.—*Proamotura insularis* var. *grandis* Dodd. Female; head and basal antennal joints.  
 Fig. 2B.—*Proamotura insularis* var. *grandis* Dodd. Female; forewing.  
 Fig. 3.—*Proamotura insularis* var. *grandis* Dodd. Male; propodeum and abdomen.  
 Fig. 3A.—*Proamotura insularis* var. *grandis* Dodd. Male; forewing.

scutellum by a deep groove, transversely wrinkled but reticulate anteriorly; propodeum as long as the scutellum, subquadrate, strongly transversely wrinkled, without median or lateral carinæ, the spiracular sulci deep and parallel, the spiracles large. Forewings subhyaline, reaching to the middle of segment 5 of the abdomen; postmarginal vein very long, fully as long as the submarginal and extending to the wing apex, the marginal less than one-half as long, the stigmal vein short; discal cilia scattered and pointlike. Legs slender; anterior and posterior coxæ long and slender; all femora long and slender; tibiæ lengthened, armed with fine slender hairs; tarsi armed beneath with about three rows of stiff spinous setæ, the second joint plainly longer than the first or third. Petiole of abdomen very long, cylindrical, somewhat longer than the posterior coxæ, margined behind, its dorsal surface strongly transversely striate but shortly smooth at base; body of abdomen very long, from dorsal aspect strongly compressed and with a median ridge extending from the base of segment 4 almost to the apex; segment 2 somewhat shorter than the petiole, 3 a little shorter than 2, 4 twice as long as 3, 5 somewhat longer than 4, 6 two-thirds longer than 5, 7 short one-fourth as long as 6, 8 twice as long as 7, 9 forming a slender stylus and almost three times as long as 8; segments finely transversely wrinkled, but 2 is almost smooth with faint reticulation; oviposital valves exerted beyond the stylus for a length equal to that of the abdomen including the stylus.

*Male*.—Unknown.

*Habitat*.—North Queensland; Cairns district, one female taken on a dead tree trunk in the jungle in November, A. P. Dodd.

*Type*.—In the Queensland Museum.

## FAMILY PTEROMALIDÆ.

### Subfamily SPALANGIINÆ.

#### *Proamotura* Girault.

*Insector Inscitiæ Menstruus*, Washington, U.S.A., vol. viii., 1920, p. 143.

*Cratomus* Dodd (not Dalman), Trans. Royal Soc. of S. Australia, vol. xlvi., 1924, p. 170.

In the paper mentioned above, the writer described two insects from Lord Howe Island in the genus *Cratomus* Dalman, pointing out, however, that Dalman's genus was unknown to him except from descriptions; at the same time their close resemblance to species of the Spalangiid genera *Spalangia* Latreille and *Cerocephala* Westwood was mentioned. Mr. A. B. Gahan of the U. S. Bureau of Entomology has very kindly compared the description in my paper with the genus *Cratomus* as understood by Ashmead; he writes: "*Cratomus* as represented by Ashmead's determination of the genotype species is evidently quite a different genus from the one you discuss. It bears little resemblance

to a *Spalangia* and is quite like *Sphegigaster* except for the head which is unlike anything else in the *Chalcidoidea*, so far as I know. The head of *Cratomus*, viewed from in front, is very broad, concave down the middle with a very broad groove on each side extending obliquely from the interior eye margin towards the clypeus, the edges of this groove forming two prominent protuberances or horns on either side near the eye margins. *Cratomus* is sculptured like any other Sphegigasterine, the pronotum is short, propodeum short without distinct median or lateral carinae, the parapsidal grooves absent, and the abdomen shortly petiolate." Thus there is little doubt that the two species described by me are wrongly placed.

However, the genus has been described by A. A. Girault, the type being *Proamatura aquila* Girault. I have seen the type species, and beside the two species from Lord Howe Island, have taken a fourth species which is described herewith.

Girault placed the genus in the *Cleonymidae*, to which family, in my mind, it cannot possibly belong. Despite the presence of two apical spurs on the posterior tibiae, it is clearly a Spalangiid. In this determination Mr. Gahan has concurred, as follows:—"I am of the opinion that your insect must be a *Spalangiine* more or less closely related to *Cerocephala*. The long pronotum and propodeum, complete foveolate parapsidal grooves, longly petiolated abdomen, maculated wings, and smooth head and thorax certainly suggest *Cerocephala*, and do not fit anywhere else in the *Chalcidoidea* that I can think of."

Under the name *Cratomus*, I have fully described the generic characters; these characters are diagnosed in this paper in the description of the form named *P. insularis*, variety *grandis*. The genus may be distinguished from other Spalangiid genera by the deep antennal grooves, the head thus appearing tricornute, and the insertion of the antennae in the middle of the face. The male is known in *insularis* only; in that species the petiole is very short in the female, long in the male. The tuft of hairs near the apex of the sub-marginal vein in *aquila* is absent in the other species.

#### Key to the Species of *Proamatura* Girault.

- |  |                                |
|--|--------------------------------|
| 1. Forewings with two cross-bands .. .. .  | 2.                             |
| Forewings with one cross-band .. .. .  | <i>viridiotum</i> Dodd.        |
| 2. Pronotum sub-concentrically striate; a strong tuft of hairs at end of sub-marginal vein .. .. . | <i>aquila</i> Girault.         |
| Pronotum smooth; no tuft of hairs on submarginal vein .. .. .                                      | 3.                             |
| 3. Petiole of abdomen short, transverse .. .. .  | <i>insularis</i> Dodd.         |
| Petiole of abdomen plainly longer than wide .. .. .  | <i>perpulchra</i> new species. |

#### *Proamatura aquila* Girault.

Insector Inscitiæ Menstruus, Washington, U.S.A., 1920, p. 143.

*Female*.—Length, 1.75–2.25 mm.

Head and thorax clear yellow-brown, the mesoscutum, scutellum and base of propodeum somewhat darker; abdomen metallic-purple, reddish at base;

legs fulvous, the coxæ brownish, the posterior coxæ washed with metallic above; antennal scape yellow, the pedicel and flagellum yellow-brown, the club somewhat darker.

Frons plainly convex, antennal scrobes deep and continued to the mouth, the three ridges distinct; upper frons and vertex smooth, with scattered pin-punctures; scrobes very faintly sculptured, the frons on either side pubescent with numerous punctures and longitudinal striæ; cheeks with numerous punctures. Antennal scape somewhat curved, produced at apex to enclose base of pedicel; pedicel one-third longer than its greatest width; funicle 1 distinctly longer than the pedicel, almost twice as long as its greatest width, 3 as wide as long, 6 plainly wider than long; club longer than the two preceding joints united, the divisions indicated. Pronotum densely finely sub-concentrically striate; scutum and axillæ smooth; scutellum no longer than its greatest width, smooth medially, longitudinally striate laterally, faintly reticulate posteriorly; propodeum rather strongly reticulate-rugose, the median carina hardly marked, the lateral carinæ delicate and irregular. Forewings hyaline, with two pale brown cross-bands, the first band very narrow, the second broad; discal cilia point-like, scattered in the distal three-fifths of the wing; marginal cilia along the distal margin moderately long; a strong tuft of hairs is present at the apex of the submarginal vein. Abdominal petiole a little longer than wide; body of abdomen from lateral aspect almost straight above, convex beneath, the oviposital valves exerted for a short distance; posterior margin of segment 2 sharply incised at meson.

*Male*.—Unknown.

*Habitat*.—Queensland; Brisbane, in March, H. Hacker; Ayr, three females in June, A. P. Dodd; Cairns, one female in November, A. P. Dodd. The Brisbane examples were bred from beetle-infested wood of *Mallotus philippinensis*.

*Type*.—In the Queensland Museum.

#### ***Proamotura insularis* Dodd.**

*Cratomus insularis* Dodd, Trans. Royal Soc. of S. Australia, vol. xlviii., 1924, p. 171.

Lord Howe Island.

#### ***Proamotura insularis grandis* new variety.**

*Female*.—Length, excluding the ovipositor, 4-4.75 mm.

Black, the prothorax red anteriorly; head red, with a dark spot around the ocelli; abdomen deep red, dusky at base and apex, with a broad black cross-band at one-half its length; oviposital valves pale yellowish for basal half, fuscous for apical half; antennæ wholly red; anterior and intermediate coxæ blackish, the posterior coxæ yellowish-white; all femora black, the tibiae dusky-brown, the tarsi testaceous, the trochanters red.

Frons convex and somewhat produced between the eyes, the ridges between and on either side of the deep antennal grooves very sharply defined, the central ridge appearing as a thin carina above and reaching almost to the frontal ocellus; below the antennal insertion the central ridge broadens and flattens, extends to the clypeus, and is separated on either side from the face by a thin groove; vertex smooth except for scattered small punctures bearing fine setæ, in front of the frontal ocellus with larger more numerous punctures; scrobes finely sub-concentrically striate; between the scrobes and the eyes, the frons is longitudinally striate and with shallow scattered punctures; face below the line of the antennal insertion obliquely striate, indefinitely punctate, and with fine rather dense pubescence; cheeks rather densely punctate. Antennæ inserted in the middle of the frons; 9-jointed, scape, pedicel, six funicle joints, the club solid but showing indications of two divisions; flagellum slightly clavate; scape moderately long and stout, somewhat curved, produced on either side at apex around the base of the pedicel; pedicel one-third longer than its greatest width; funicle 1 narrowed at base, longer than the pedicel, almost twice as long as its greatest width; 2-6 decreasing in length, 3 as wide as long, 6 plainly wider than long; club joint fully twice as long as its greatest width. Thorax, from dorsal aspect, twice as long as its greatest width; from lateral aspect somewhat convex above; pronotum large, as long as wide, sub-quadrate, smooth except for a few small punctures, its neck transversely striate; scutum somewhat shorter than the pronotum, the parapsidal furrows very deep and strongly foveate, the lobes convex, the surface smooth, the lateral lobes and the median lobe posteriorly with a few small setigerous punctures; scutellum as long as its greatest width, smooth, with a few small punctures near its lateral margins, faintly reticulate against the posterior margin, and just before the posterior margin on either side there is a transverse row of foveæ extending for one-third its width; axillæ meeting inwardly, separated from the scutellum by a coarsely foveate groove; propodeum rather long, narrowed posteriorly and with a short neck, the median and lateral carinæ distinct but not continued on the neck; within the lateral carinæ the surface is strongly irregularly transversely striate, outside the lateral carinæ and on the posterior neck the sculpture is coarsely rugose-reticulate. Anterior and posterior femora somewhat swollen; tibiæ slender, the posterior pair at apex with two slender unequal spines; posterior coxæ rather long. Forewings well-developed; lightly yellowish with two dark cross-bands; the first band is twice as deep as broad and is appended from the upward bend of the submarginal vein; the second band is the larger, almost as broad as deep, its distal margin convex, and is appended from the apex of the marginal and all of the stigmal vein; marginal cilia absent proximally, the distal margin with a dense rather short fringe of hairs; discal cilia absent for basal two-fifths of the wing, fine and scattered in the distal three-fifths, but coarse and dense against the distal margin; venation fuscous, very distinct; marginal vein two-thirds as long as the submarginal, the stigmal vein long and curved and about as long as the postmarginal; submarginal vein bearing a few bristles,

the marginal and postmarginal bearing dense long hairs; no tuft of bristles at the end of the submarginal vein, but beneath the distal end of the marginal and the base of the stigmal veins there is a patch of scattered coarse hairs. Abdomen convex beneath, a little convex above, rounded on its sides, no longer than the thorax; petiole short, transverse, rugose; body of abdomen smooth, finely transversely wrinkled on basal half of segments 5-7; segment 2 (first body segment) as long as 4, its posterior margin deeply concave at meson; oviposital valves stout, exerted for a length equal to one-half that of the abdomen.

*Male*.—Length, 2.5-3 mm.

Body wholly black, the dorsal surface with metallic green reflections; legs coloured as in the female but the posterior coxæ are broadly dark at base; antennal scape black, the pedicel deep red, the flagellum deep red basally verging to blackish apically.

Head as in the female, the sculpture similar, the frontal ridges less pronounced. Antennæ 11-jointed; scape rather short and stout; pedicel distinctly shorter than funicle 2; funicle 1 small, wider than long, like a ring-joint; 2-8 longitudinally striate, 2 somewhat the longest, 8 a little longer than wide; apical joint almost twice as long as the penultimate. Structure and sculpture of thorax as in the female. Forewings sub-hyaline, with one cross-band or blotch appended from the stigmal and apex of marginal veins. Petiole of abdomen very long, slender, longer than the posterior coxæ, more than one-half as long as the body of the abdomen, several times as long as wide, finely rugose; body of abdomen short, strongly convex above, straight beneath; segment 2 longest, a little longer than 3, its posterior margin straight; 3 very plainly longer than 4; 4-8 transverse.

*Habitat*.—North Queensland; Cairns district, three females, eight males, on tree trunks in November, A. P. Dodd.

*Type and Allotype* in the Queensland Museum.

*Paratypes* in the author's collection.

The differences in colour and abdominal characters between the sexes is very pronounced.

After comparing this form with *insularis*, no specific differences could be detected. On account of the larger size (*insularis* 2.75 mm., *grandis* female 4-4.75 mm.) and the darker wings, it was thought advisable to separate this mainland form from the Lord Howe Island insect.

#### *Proamotura perpulchra* new species.

*Female*.—Length, excluding ovipositor, 2.25 mm.

Head chestnut-red; prothorax, mesoscutum, axillæ, and anterior half of mesopleuræ and mesosternum, red; scutellum dull metallic-green; rest of the



thorax black; abdomen dull red, broadly purplish at one-half its length and narrowly so at apex; petiole black, white for basal third; oviposital valves reddish, the apical third dusky; antennal scape pale yellow, the pedicel and flagellum fulvous, the first flagellar joint dull brown; anterior and posterior coxæ white, the latter dusky at base above, the intermediate coxæ piceous; trochanters dusky; femora reddish-brown, darker at base and apex; tibiæ reddish-brown, the posterior tibiæ darker, the anterior and intermediate tibiæ pale yellow at apex; tarsi pale yellow.

Head from dorsal aspect transverse; from lateral aspect the frons is gently convex; the frontal ridges not strongly pronounced, shorter and not nearly reaching to the anterior ocellus; vertex and upper frons smooth, with scattered pin-punctures bearing fine setæ; cheeks with scattered punctures, finely scaly centrally; antennal scrobes and lower frons striate as in *insularis*. Antennal scape moderately slender, its apex scarcely produced; pedicel almost twice as long as its greatest width; funicle 1 slightly longer than the pedicel, fully twice as long as its greatest width; 2-6 gently clavate, 6 as long as wide; club apparently 3-jointed, longer than the two preceding joints united. Pronotum somewhat wider than long, no longer than the scutum; scutellum with a row of four black hairs against either lateral margin, without the incomplete posterior row of foveæ; pronotum, scutum, scutellum, and axillæ, smooth and polished; propodeum strongly irregularly reticulate, the median carina faintly marked, the lateral carinæ weak and irregular. Anterior and posterior femora somewhat swollen. Forewings sub-hyaline, with the two brown cross-bands as in *insularis*; discal cilia scattered and point-like in the distal half of the wing, not becoming coarse and dense against the distal margin; distal margin with a long fringe of marginal cilia; postmarginal vein somewhat shorter than the stigmal. Petiole of abdomen twice as long as wide, irregularly longitudinally striate and finely rugose; segment 2 as long as 4, its posterior margin straight or faintly concave, not incised; oviposital valves exerted for a length equal to one-half that of the body of the abdomen.

*Male*.—Unknown.

*Habitat*.—South Queensland; Mt. Tambourine, 2,000 ft., one female in January, A. P. Dodd.

*Type*.—In the Queensland Museum.

***Proamotura perpulchra metallica* new variety.**

*Female*.—Length, 1.75-2.20 mm.

Head deep reddish-brown suffused with metallic, also prothorax, meso-scutum, and mesopleuræ; scutellum and axillæ metallic green, the propodeum and metapleuræ black; abdomen wholly metallic purplish; antennal scape testaceous, joints 5-8 deep red, 2-4 brownish, the club dusky; the colour otherwise as in *perpulchra*. Second band of forewing much larger than in

*perpulchra*, its distal margin strongly convex (almost straight in *perpulchra*). Oviposital valves exerted for a length equal to two-thirds that of body of abdomen.

*Male*.—Unknown.

*Habitat*.—North Queensland; Cairns district, two females in April, A. P. Dodd.

*Type*.—In the Queensland Museum.

*Paratype*.—In the author's collection.

At first glance, this form appears very distinct from *perpulchra*; however, the difference lies mainly in the more extensive metallic colouration. Possibly a series of specimens would show that the colour is not constant.

#### ***Proamotura viridnotum* Dodd.**

*Cratomus viridnotum* Dodd, Trans. Royal Soc. of S. Australia, vol. xlviii., 1924, p. 171.

Lord Howe Island.

### PROCTOTRYPOIDEA.

#### Family SCELIONIDÆ.

##### ***Oxyteleia* Kieffer.**

Ann. Soc. Scient., Brussels, vol. xxxii., 1908, p. 118.

In *Das Tierreich*, 1926, Kieffer states of this genus "Distinguished from *Ceratoteleia* by the 2-toothed metanotum," and lists six species from New Guinea, Brazil, and the West Indies, the type being *O. bidentata* Kieffer from New Guinea. In the *Genera Insectorum*, 1910, he further states that the metanotum is armed with a tooth or spine at each extremity of the posterior border.

The species described below is very similar to the many Australian species of the *Baryconus-Ceratoteleia* relationship, being distinguished from them by the teeth at the posterior angles of the metanotum.

##### ***Oxyteleia bifurcata* new species.**

*Female*.—Length, 2.50 mm.

Black; legs, including the coxæ, and first two antennal joints clear golden-yellow; mandibles red.

Head, from dorsal aspect, twice as wide as long, the vertex sloping to the occipital border which is foveate, margined, and semi-circularly concave; eyes moderately large, with scattered long fine hairs; ocelli rather wide apart, moderately large, the lateral pair separated from the eye margins by less than their own diameter; cheeks and temples rather broad; frons broad, without a frontal impression; upper frons and vertex with numerous scattered punctures

of moderate size bearing long fine setæ, and with indications of short blunt longitudinal striæ; frons for the most part smooth and shining, against the eyes with a few blunt obscure striæ; lower face against the mouth strongly striate; cheeks with numerous punctures and more or less obscure striæ, strongly striate against the mouth; mandibles tridentate, the teeth acute. Antennal scape long and slender; pedicel two-thirds longer than its greatest width; funicle 1 as wide and slightly longer than the pedicel, 2 plainly shorter than 1 and not much longer than wide, 3 quadrate, 4 wider than long; club 6-jointed, joint 1 rather small, 2-5 each about twice as wide as long, 3 slightly the widest. Thorax, from dorsal aspect, one-third longer than its greatest width; pronotum very narrowly visible from above, densely punctate and with long fine hairs; scutum stout, convex anteriorly, its anterior margin broadly rounded; parapsidal furrows wide apart, complete, foveate, widening posteriorly; parapsides and anterior half of median lobe with dense punctures of moderate size bearing fine setæ, the posterior half of the median lobe smooth with a very few punctures; scutellum with its posterior margin almost straight, the anterior and posterior margins with very strong rows of foveæ, the disc smooth with scattered very fine punctures bearing fine setæ; metanotal plate strongly foveate, wide, almost as wide as the posterior margin of the scutellum, transverse, its posterior angles each with a stout tooth which are widely separated; propodeum sloping, moderately short, strongly excavated at meson, the excavated area bounded by carinæ which are wide apart at base and diverge slightly to join the true lateral carinæ, the lateral margins with a stout blunt tooth anteriorly and a small blunt tooth at the posterior angles; pro- and meso-pleuræ densely punctate, the former with a smooth area above, the depression on the meso-pleuræ smooth and very deep; a distinct narrow sclerite is present between the propleuræ and the mesopleuræ. Forewings broad, extending almost to apex of abdomen; uniformly lightly brownish; venation distinct, dusky-yellow; submarginal vein joining the costa at one-half the wing length; marginal vein short, not more than one-third as long as the stigmal, which is long, very oblique, knobbed at apex, the postmarginal a little shorter than the stigmal; basal vein not marked. Abdomen one-third longer than the head and thorax united;  $2\frac{1}{2}$  times as long as its greatest width; gradually narrowed toward the base and coming to a point at the apex; segments 1-3 with a dorso-lateral carina on either side; segment 1 not one-half as wide at base as posteriorly, somewhat shorter than its posterior width, at base with a short horn or protuberance; 2 gradually widening, one-third longer than 1; 3 one-fourth longer than 2, three-fourths as long as wide; 4 less than one-half as long as 3; 5 somewhat shorter than 4; 6 somewhat longer than 5, as long as its greatest width, its lateral margins angled at one-half their length; segment 1 with five strong carinæ medially, rugulose laterally, and with one abbreviated stria on either side, the basal horn smooth; 2 shining, with strong sparse striæ which curve away somewhat from the straight median stria, the surface between the striæ coriaceous; 3 rather densely finely punctate, but posteriorly there is a median area smooth except for a few punctures, laterally

the surface is finely striate and finely punctate between the striae; 4 and 5 smooth, with scattered punctures bearing fine hairs; 6 densely granulate and with some pubescence.

*Male*.—Very similar to the female except in sexual characters. Punctures of segment 3 of abdomen denser and sub-confluent, the smooth posterior area small; abdomen showing eight segments, 7 and 8 very short, 6 short and punctate like 5. Antennæ black, the first two joints clear golden-yellow; pedicel not much longer than its greatest width; flagellar joints moniliform and shortly pubescent; 1 plainly longer than the pedicel, almost twice as long as its greatest width; 2-9 subequal, each a little longer than wide, the apical joint two-thirds longer.

*Habitat*.—North Queensland; Cairns district, one female, seven males in November, A. P. Dodd.

*Type and Allotype*.—In the Queensland Museum.

*Paratypes*.—In the author's collection.

#### **Aratala** new genus.

*Female*.—Head subglobose; occipital margin deeply convex and not margined; from lateral aspect the outline of the frons is convex; eyes small, situated rather low down on the frons, not as long as their distance from the posterior margin, bare; ocelli small, rather close together, situated behind the posterior line of the eyes; cheeks broad; face lightly depressed above the antennal insertion; mandibles bidentate, the teeth small, the outer tooth acute, the inner tooth truncate; maxillary palpi 4-jointed, the labial palpi 2-jointed. Antennæ 12-jointed, the scape slender, the funicle joints short, the club 5-jointed. Thorax slender, the dorsal surface rather flattened; pronotum long, narrowed anteriorly in the form of a neck; scutum narrowed anteriorly, as long as its greatest width, the parapsidal furrows absent; scutellum as long as wide, rounded behind, without anterior or posterior foveate lines, its margins not differentiated; metanotum short, prolonged medially into a conical flat area fitting close into the propodeum and reaching its posterior margin; propodeum long laterally and sloping, its posterior margin faintly concave, its posterior angles with a minute tooth; propleuræ large, faintly depressed anteriorly; mesopleuræ large, entire, without the usual dorso-ventral depression, faintly depressed against the coxæ; metapleuræ moderately large, entire. Femora somewhat thickened; posterior coxæ slender; posterior tibiæ slender for their basal half, thickened for their apical half; proximal joint of posterior tarsi very long, as long as the following united. Forewings well-developed; marginal cilia moderately short; discal cilia very dense but absent at the wing base; venation absent, except for a trace of a submarginal vein and a thickened mark in lieu of a marginal vein. Hindwings long. Abdomen one-half longer than the head and thorax united; slender, narrowly spatulate;

segment 1 narrowed, petioliform, depressed at its anterior and posterior margins, somewhat longer than wide; 2 no longer than 1, plainly shorter than its greatest width; 3 as long as 1 and 2 or 4-6 united, one-half longer than its greatest width; 4-6 each much wider than long.

*Male*.—Unknown.

*Type*.—*A. globiceps*, described herewith.

A peculiar genus with obsolete venation, related to *Doddiella* Kieffer, *Aneuroscelio* Kieffer, and *Mallateleia* Dodd, from which genera it may be distinguished by the form of the head, small eyes, elongate pronotum, and the conical projection of the metanotum fitting into the propodeum. The absence of the dorso-ventral impression of the mesopleuræ appears unusual for the family.



Text-figure 4.—*Aratala globiceps* Dodd. Head, thorax, and abdomen of female.

#### *Aratala globiceps* new species.

*Female*.—Length, 1.75 mm.

Dull black; legs, including the coxæ, brownish-yellow, the posterior coxæ at base with dense silvery pubescence; antennæ piceous, the scape yellow at base.

Head with dense fine scaly impressed reticulation and numerous scattered fine whitish hairs. Antennal scape rather short; pedicel twice as long as its greatest width; funicle joints smaller and narrower than the pedicel, 1 a little longer than wide, 2-5 each somewhat wider than long, 5 slightly widened; club compact, joints 1-4 transverse. Pronotum rather coarsely scaly, with a dense pubescence of coarse silvery hairs; scutum and scutellum with fine scaly reticulation and numerous fine silvery hairs; projection of metanotum finely longitudinally striate; propodeum smooth; propleura finely reticulate above, finely longitudinally striate below, with a few fine hairs; mesopleuræ smooth with a few fine hairs and fine striæ against the tegulæ; metapleuræ smooth. Forewings distinctly clouded, the basal third hyaline; hindwings hyaline. Abdominal segments 1-3 smooth and without sculpture; lateral margins of 1 and 2 with dense silvery pubescence; 4 smooth, but in some lights showing finely reticulate; 5 and 6 with fine reticulation and very fine pubescence.

*Habitat*.—New South Wales, Moonie River, three females in October. A. P. Dodd.

*Type*.—In the Queensland Museum.

*Paratypes*.—In the author's collection.